

WHAT IS CLAIMED IS:

1. A paper product comprising:

papermaking fiber; and

a thermally bondable fiber exhibiting hydrophilicity, wherein said product has been wet formed.
2. The paper product according to claim 1, wherein the papermaking fiber is wood fiber.
3. The paper product according to claim 1, wherein the thermally bondable fiber is chosen from at least one of a bicomponent and a tricomponent fiber.
4. The paper product according to claim 1, wherein the thermally bondable fiber is a bicomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, poly trimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.
5. The paper product according to claim 1, wherein the thermally bondable fiber is a tricomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, poly trimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

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6. The paper product according to claim 1, wherein the thermally bondable fiber is surface modified by the introduction of a surfactant being chosen from at least one of an anionic, a cationic, a zwitterionic, and a non-ionic surfactant.

7. The paper product according to claim 6, wherein the surfactant comprises a non-ionic surfactant.

8. The paper product according to claim 1, further comprising a wet-strength resin.

9. The paper product according to claim 8, wherein the wet-strength resin is chosen from at least one of permanent wet strength agents and temporary wet strength agents.

10. The paper product according to claim 9, wherein the wet strength resin comprises a permanent wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, urea-formaldehyde resins, melamine formaldehyde resins, and polyamide-epichlorohydrin resins.

11. The paper product according to claim 9, wherein the wet-strength resin comprises a temporary wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, glyoxal, malonic dialdehyde, succinic dialdehyde, glutaraldehyde, dialdehyde starches, substituted or reacted starches, disaccharides, polysaccharides, polyethylene imine, chitosan, and reacted polymeric reaction products of monomers or polymers having aldehyde groups.

12. The paper product according to claim 1, further comprising a dry strength agent chosen from at least one of starch, guar gum, polyacrylamides, and carboxymethyl cellulose.

13. The paper product according to claim 1, wherein the thermally bondable fiber is present in an amount of not less than about 2%.

14. The paper product according to claim 1, wherein the thermally bondable fiber is present in an amount of not more than about 50%.

15. The paper product according to claim 1, wherein the thermally bondable fiber is present in an amount of from about 5 to about 30%.

16. The paper product according to claim 1, wherein the product is a stratified product.

17. The paper product according to claim 1, wherein the product is a homogeneous product.

18. The paper product according to claim 1, wherein the thermally bondable fiber has a length of not less than about 1 mm.

19. The paper product according to claim 1, wherein the thermally bondable fiber has a length of not more than about 25 mm.

20. The paper product according to claim 1, wherein the thermally bondable fiber has a length of from about 6 to about 13 mm.

21. The paper product according to claim 1 having a basis weight of not less than about 10 lbs/ream.

22. The paper product according to claim 1 having a basis weight of not more than about 60 lbs/ream.

23. The paper product according to claim 1 having a basis weight of from about 13 to about 40 lbs/ream.

24. The paper product according to claim 1, wherein the fibers are bonded by heat treatment.

25. The paper product according to claim 1, wherein the product is embossed.

26. The paper product according to claim 25, wherein the fibers are bonded by heat treatment.

27. The paper product according to claim 26, wherein the fibers are thermally bonded before or after the embossing.

28. A paper product comprising:
papermaking fiber; and
a thermally bondable fiber exhibiting hydrophilicity;
wherein the paper product has been wet formed; and
wherein the paper product exhibits a Wet Breaking Length of at least about 250 meters.

29. The paper product according to claim 28, wherein the Wet Breaking Length is at least about 300 meters.

30. The paper product according to claim 28 wherein the Wet Breaking Length is from about 250 meters to about 500 meters.

31. The paper product according to claim 28, wherein the papermaking fiber is wood fiber.

32. The paper product according to claim 28, wherein the thermally bondable fiber is chosen from at least one of a bicomponent and a tricomponent fiber.

33. The paper product according to claim 32, wherein the thermally bondable fiber is a bicomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

34. The paper product according to claim 32, wherein the thermally bondable fiber is a tricomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalate, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

35. The paper product according to claim 28, wherein the thermally bondable fiber is surface modified by the introduction of a surfactant being chosen from at least one of an anionic, a zwitterionic, a cationic, and a non-ionic surfactant.

36. The paper product according to claim 35, wherein the surfactant comprises a non-ionic surfactant.

37. The paper product according to claim 28, further comprising a wet-strength resin.

38. The paper product according to claim 37, wherein the wet-strength resin is chosen from at least one of permanent wet strength agents and temporary wet strength agents.

39. The paper product according to claim 38, wherein the wet strength resin comprises a permanent wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, urea-formaldehyde resins, melamine formaldehyde resins, and polyamide-epichlorohydrin resins.

40. The paper product according to claim 38, wherein the wet-strength resin comprises a temporary wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, glyoxal, malonic dialdehyde, succinic dialdehyde, glutaraldehyde, dialdehyde starches, substituted or reacted starches, disaccharides, polysaccharides, polyethylene imine, chitosan, and reacted polymeric reaction products of monomers or polymers having aldehyde groups.

41. The paper product according to claim 28, further comprising a dry strength agent chosen from at least one of starch, guar gum, polyacrylamides, and carboxymethyl cellulose.

42. The paper product according to claim 28, wherein the thermally bondable fiber is present in an amount of not less than about 2%.

43. The paper product according to claim 28, wherein the thermally bondable fiber is present in an amount of not more than about 50%.

44. The paper product according to claim 28, wherein the thermally bondable fiber is present in an amount of from about 5 to about 30%.

45. The paper product according to claim 28, wherein the product is a stratified product.

46. The paper product according to claim 28, wherein the product is a homogeneous product.

47. The paper product according to claim 28, wherein the thermally bondable fiber has a length of not less than about 1 mm.

48. The paper product according to claim 28, wherein the thermally bondable fiber has a length of not more than about 25 mm.

49. The paper product according to claim 28, wherein the thermally bondable fiber has a length of from about 6 to about 13 mm.

50. The paper product according to claim 28, having a basis weight of not less than about 10 lbs/ream.

51. The paper product according to claim 28, having a basis weight of not more than about 60 lbs/ream.

52. The paper product according to claim 28, having a basis weight of from about 13 to about 40 lbs/ream.

53. The paper product according to claim 28, wherein the fibers are bonded by heat treatment.

54. The paper product according to claim 28, wherein the product is embossed.

55. The paper product according to claim 54, wherein the fibers are bonded by heat treatment.

56. The paper product according to claim 55, wherein the fibers are thermally bonded before or after the embossing.

57. A paper product comprising:

papermaking fiber; and

a thermally bondable fiber exhibiting hydrophilicity;

wherein the paper product has been wet formed; and

wherein the paper product exhibits a CD Wet Breaking Length of at least about 250 meters and a SAT of at least about 5 g/g.

58. The paper product according to claim 57, wherein the CD Wet Breaking Length is at least about 300 meters.

59. The paper product according to claim 57, wherein the CD Wet Breaking Length is from about 250 meters to about 500 meters

60. The paper product according to claim 57, wherein the SAT is at least about 6 g/g.

61. The paper product according to claim 57, wherein the SAT is from about 5 g/g to about 14 g/g.

62. The paper product according to claim 57, wherein the papermaking fiber is wood fiber.

63. The paper product according to claim 57, wherein the thermally bondable fiber is chosen from at least one of a bicomponent and a tricomponent fiber.

64. The paper product according to claim 63, wherein the thermally bondable fiber is a bicomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

65. The paper product according to claim 63, wherein the thermally bondable fiber is a tricomponent fiber that comprises one or more polyesters, polyolefins,

copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

66. The paper product according to claim 57, wherein the thermally bondable fiber is surface modified the introduction of a surfactant being chosen from at least one of an anionic, a zwitterionic, cationic, and a non-ionic surfactant.

67. The paper product according to claim 66, wherein the surfactant comprises a non-ionic surfactant.

68. The paper product according to claim 57, further comprising a wet-strength resin.

69. The paper product according to claim 68, wherein the wet-strength resin is chosen from at least one of permanent wet strength agents and temporary wet strength agents.

70. The paper product according to claim 69, wherein the wet strength resin comprises a permanent wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, urea-formaldehyde resins, melamine formaldehyde resins, and polyamide-epichlorohydrin resins.

71. The paper product according to claim 69, wherein the wet-strength resin comprises a temporary wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, glyoxal, malonic dialdehyde, succinic dialdehyde, glutaraldehyde, dialdehyde starches, substituted or reacted starches, disaccharides,

polysaccharides, polyethylene imine, chitosan, and reacted polymeric reaction products of monomers or polymers having aldehyde groups.

72. The paper product according to claim 57, further comprising a dry strength agent chosen from at least one of starch, guar gum, polyacrylamides, and carboxymethyl cellulose.

73. The paper product according to claim 57, wherein the thermally bondable fiber is present in an amount of not less than about 2%.

74. The paper product according to claim 57, wherein the thermally bondable fiber is present in an amount of not more than about 50%.

75. The paper product according to claim 57, wherein the thermally bondable fiber is present in an amount of from about 5 to about 30%.

76. The paper product according to claim 57, wherein the product is a stratified product.

77. The paper product according to claim 57, wherein the product is a homogeneous product.

78. The paper product according to claim 57, wherein the thermally bondable fiber has a length of not less than about 1 mm.

79. The paper product according to claim 57, wherein the thermally bondable fiber has a length of not more than about 25 mm.

80. The paper product according to claim 57, wherein the thermally bondable fiber has a length of from about 6 to about 13 mm.

81. The paper product according to claim 57, having a basis weight of not less than about 10 lbs/ream.

82. The paper product according to claim 57, having a basis weight of not more than about 60 lbs/ream.

83. The paper product according to claim 57, having a basis weight of from about 13 to about 40 lbs/ream.

84. The paper product according to claim 57, wherein the fibers are bonded by heat treatment.

85. The paper product according to claim 57, wherein the product is embossed.

86. The paper product according to claim 85, wherein the fibers are bonded by heat treatment.

87. The paper product according to claim 86, wherein the fibers are thermally bonded after the embossing.

88. A paper product comprising:
papermaking fiber; and
a thermally bondable fiber exhibiting hydrophilicity;
wherein said product has been wet formed; and
wherein the paper product exhibits a reticulated matrix of thermally bondable fibers.

89. The paper product according to claim 88, wherein the CD Wet Breaking Length is at least about 250 meters.

90. The paper product according to claim 88, wherein the CD Wet Breaking Length is from about 250 meters to about 500 meters

91. The paper product according to claim 88, wherein the SAT is at least about 5 g/g.

92. The paper product according to claim 88, wherein the SAT is from about 5 g/g to about 14 g/g.

93. The paper product according to claim 88, wherein the papermaking fiber is wood fiber.

94. The paper product according to claim 88, wherein the thermally bondable fiber is chosen from at least one of a bicomponent and a tricomponent fiber.

95. The paper product according to claim 94, wherein the thermally bondable fiber is a bicomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

96. The paper product according to claim 94, wherein the thermally bondable fiber is a tricomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

97. The paper product according to claim 88, wherein the thermally bondable fiber is surface modified by the introduction of a surfactant being chosen from at least one of an anionic, a zwitterionic, a cationic, and a non-ionic surfactant.

98. The paper product according to claim 97, wherein the surfactant comprises a non-ionic surfactant.

99. The paper product according to claim 88, further comprising a wet-strength resin.

100. The paper product according to claim 99, wherein the wet-strength resin is chosen from at least one of permanent wet strength agents and temporary wet strength agents.

101. The paper product according to claim 100, wherein the wet strength resin comprises a permanent wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, urea-formaldehyde resins, melamine formaldehyde resins, and polyamide-epichlorohydrin resins.

102. The paper product according to claim 100, wherein the wet-strength resin comprises a temporary wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, glyoxal, malonic dialdehyde, succinic dialdehyde, glutaraldehyde, dialdehyde starches, substituted or reacted starches, disaccharides, polysaccharides, polyethylene imine, chitosan, and reacted polymeric reaction products of monomers or polymers having aldehyde groups.

103. The paper product according to claim 88, further comprising a dry strength agent chosen from at least one of starch, guar gum, polyacrylamides, and carboxymethyl cellulose.

104. The paper product according to claim 88, wherein the thermally bondable fiber is present in an amount of not less than about 2%.

105. The paper product according to claim 88, wherein the thermally bondable fiber is present in an amount of not more than about 50%.

106. The paper product according to claim 88, wherein the thermally bondable fiber is present in an amount of from about 5 to about 30%.

107. The paper product according to claim 88, wherein the product is a stratified product.

108. The paper product according to claim 88, wherein the product is a homogeneous product.

109. The paper product according to claim 88, wherein the thermally bondable fiber has a length of not less than about 1 mm.

110. The paper product according to claim 88, wherein the thermally bondable fiber has a length of not more than about 25 mm.

111. The paper product according to claim 88, wherein the thermally bondable fiber has a length of from about 6 to about 13 mm.

112. The paper product according to claim 88, having a basis weight of not less than about 10 lbs/ream.

113. The paper product according to claim 88, having a basis weight of not more than about 60 lbs/ream.

114. The paper product according to claim 88, having a basis weight of from about 13 to about 40 lbs/ream.

115. The paper product according to claim 88, wherein the fibers are bonded by heat treatment.

116. The paper product according to claim 88, wherein the product is embossed.

117. The paper product according to claim 116, wherein the fibers are bonded by heat treatment.

118. The paper product according to claim 117, wherein the fibers are thermally bonded before or after the embossing.

119. A method of making a paper product comprising:
dispersing papermaking fibers in an aqueous solution;
dispersing thermally bondable fibers exhibiting hydrophilicity in an aqueous solution;

forming said papermaking fibers and said thermally bondable fibers into a nascent web, wherein said web is formed at a line speed in excess of 1000 ft/min.,
and

drying said web.

120. The method according to claim 119, wherein said papermaking fibers and said thermally bondable fibers are dispersed simultaneously.

121. The method according to claim 119, wherein said papermaking fibers and said thermally bondable fibers are dispersed sequentially.

122. The method according to claim 119, wherein the dispersion of fibers further comprises a wet strength adjusting agent.

123. The method according to claim 122, wherein the wet-strength resin is chosen from at least one of permanent wet strength agents and temporary wet strength agents.

124. The method according to claim 123, wherein the wet strength resin comprises a permanent wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, urea-formaldehyde resins, melamine formaldehyde resins, and polyamide-epichlorohydrin resins.

125. The method according to claim 123, wherein the wet-strength resin comprises a temporary wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, glyoxal, malonic dialdehyde, succinic dialdehyde, glutaraldehyde, dialdehyde starches, substituted or reacted starches, disaccharides, polysaccharides, polyethylene imine, chitosan, and reacted polymeric reaction products of monomers or polymers having aldehyde groups.

126. The method according to claim 119, further comprising a dry strength agent chosen from at least one of starch, guar gum, polyacrylamides, and carboxymethyl cellulose.

127. The method according to claim 119, wherein said web is formed by conventional wet pressing.

128. The method according to claim 127, wherein said web is creped from a Yankee dryer.

129. The method according to claim 127, wherein the fibers in the web are stratified.

130. The method according to claim 119, wherein said web is formed by through air drying.

131. The method according to claim 130, wherein said web is creped from a Yankee dryer.

132. The method according to claim 130, wherein said web is uncreped.

133. The method according to claim 130, wherein the fibers in the web are stratified.

134. The method according to claim 119, wherein the dried paper web is subject to heat treatment.

135. The method according to claim 134, wherein the heat treatment is carried out at a temperature of at least about 165°F.

136. The method according to claim 134, wherein the heat treatment is carried out at a temperature of between about 200°F and about 310°F.

137. The method according to claim 119, wherein the papermaking fiber is wood fiber.

138. The method according to claim 119, wherein the thermally bondable fiber is chosen from at least one of a bicomponent or a tricomponent fiber.

139. The method according to claim 138, wherein the thermally bondable fiber is a bicomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

140. The method according to claim 138, wherein the thermally bondable fiber is a tricomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates,

polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

141. The method according to claim 119, wherein the thermally bondable fiber is surface is modified by the introduction of a surfactant chosen from at least one of an anionic, a zwitterionic, a cationic, and a non-ionic surfactant.

142. The method according to claim 141, wherein the surfactant comprises a non-ionic surfactant.

143. The method according to claim 119, wherein the thermally bondable fiber is present in an amount of not less than about 2%.

144. The method according to claim 119, wherein the thermally bondable fiber is present in an amount of not more than about 50%.

145. The method according to claim 119, wherein the thermally bondable fiber is present in an amount of from about 5 to about 30%.

146. The method according to claim 119, wherein the fibers in the web are homogeneous.

147. The method according to claim 119, wherein the thermally bondable fiber has a length of not less than about 1 mm.

148. The method according to claim 119, wherein the thermally bondable fiber has a length of not more than about 25 mm.

149. The method according to claim 119, wherein the thermally bondable fiber has a length of from about 6 to about 13 mm.

150. The method according to claim 119, further comprising embossing the web.

151. The method according to claim 150, wherein the dried paper web is subject to heat treatment.

152. The method according to claim 151, wherein the heat treatment is carried out at a temperature of at least about 165°F.

153. The method according to claim 152, wherein the heat treatment is carried out at a temperature of between about 200°F and about 310°F.

154. A repulpable sheet paper product comprising:
papermaking fibers; and
thermally bondable fibers exhibiting hydrophilicity, wherein said thermally bondable fibers have not been subjected to heat treatment.

155. The repulpable sheet paper product according to claim 154, wherein the papermaking fiber is wood fiber.

156. The repulpable sheet paper product according to claim 154, wherein the thermally bondable fiber is chosen from at least one of a bicomponent or a tricomponent fiber.

157. The repulpable sheet paper product according to claim 156, wherein the thermally bondable fiber is a bicomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

158. The repulpable sheet paper product according to claim 156, wherein the thermally bondable fiber is a tricomponent fiber that comprises one or more

polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

159. The repulpable sheet paper product according to claim 154, wherein the thermally bondable fiber is modified by the introduction of a surfactant chosen from at least one of an anionic, a zwitterionic, a cationic and a non-ionic surfactant.

160. The repulpable sheet paper product according to claim 159, wherein the surfactant comprises a non-ionic surfactant.

161. The repulpable sheet paper product according to claim 154, wherein the thermally bondable fiber is present in an amount of not less than about 2%.

162. The repulpable sheet paper product according to claim 154, wherein the thermally bondable fiber is present in an amount of not more than about 50%.

163. The repulpable sheet paper product according to claim 154, wherein the thermally bondable fiber is present in an amount of from about 10 to about 30%.

164. The repulpable sheet paper product according to claim 154, wherein the fibers in the web are homogeneous.

165. The repulpable sheet paper product according to claim 154, wherein the thermally bondable fiber has a length of not less than about 1 mm.

166. The repulpable sheet paper product according to claim 154, wherein the thermally bondable fiber has a length of not more than about 25 mm.

167. The repulpable sheet paper product according to claim 154, wherein the thermally bondable fiber has a length of from about 6 to about 13 mm.

168. A method of making an embossed paper product comprising:
dispersing papermaking fibers in an aqueous solution;
dispersing thermally bondable fibers exhibiting hydrophilicity in an aqueous solution, wherein the thermally bondable fiber is chosen from at least one of a bicomponent or a tricomponent fiber;

forming said papermaking fibers and said thermally bondable fibers into a nascent web;

drying said web;

embossing said web; and

heat treating said web at a temperature of at least about 200°F.

169. The method according to claim 168, wherein said papermaking fibers and said thermally bondable fibers are dispersed simultaneously.

170. The method according to claim 168, wherein said papermaking fibers and said thermally bondable fibers are dispersed sequentially.

171. The method according to claim 168, wherein the dispersion of fibers further comprises a wet strength adjusting agent.

172. The method according to claim 171, wherein the wet-strength resin is chosen from at least one of permanent wet strength agents and temporary wet strength agents.

173. The method according to claim 172, wherein the wet strength resin comprises a permanent wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, urea-formaldehyde resins, melamine formaldehyde resins, and polyamide-epichlorohydrin resins.

174. The method according to claim 172, wherein the wet-strength resin comprises a temporary wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, glyoxal, malonic dialdehyde, succinic dialdehyde, glutaraldehyde, dialdehyde starches, substituted or reacted starches, disaccharides, polysaccharides, polyethylene imine, chitosan, and reacted polymeric reaction products of monomers or polymers having aldehyde groups.

175. The method according to claim 168, further comprising a dry strength agent chosen from at least one of starch, guar gum, polyacrylamides, and carboxymethyl cellulose.

176. The method according to claim 168, wherein said web is formed by conventional wet pressing.

177. The method according to claim 176, wherein said web is creped from a Yankee dryer.

178. The method according to claim 176, wherein the fibers in the web are stratified.

179. The method according to claim 168, wherein said web is formed by through air drying.

180. The method according to claim 179, wherein said web is creped from a Yankee dryer.

181. The method according to claim 179, wherein said web is uncreped.

182. The method according to claim 179, wherein the fibers in the web are stratified.

183. The method according to claim 168, wherein the papermaking fiber is wood fiber.

184. The method according to claim 168, wherein the thermally bondable fiber is a bicomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

185. The method according to claim 168, wherein the thermally bondable fiber is a tricomponent fiber that comprises one or more polyesters, polyolefins, copolyolefins, polyethylenes, polypropylenes, polybutylenes, polyethylene terephthalates, polytrimethylene terephthalates, polybutylene terephthalates, polyurethanes, polyamides, polycarboxylic acids, alkylene oxides, polylactic acids, and mixtures thereof.

186. The method according to claim 168, wherein the thermally bondable fiber is surface modified by the introduction of a surfactant chosen from at least one of an anionic, a zwitterionic, a cationic, and a non-ionic surfactant.

187. The method according to claim 186, wherein the surfactant comprises a non-ionic surfactant.

188. The method according to claim 168, wherein the thermally bondable fiber is present in an amount of not less than about 2%.

189. The method according to claim 168, wherein the thermally bondable fiber is present in an amount of not more than about 50%.

190. The method according to claim 168, wherein the thermally bondable fiber is present in an amount of from about 10 to about 30%.

191. The method according to claim 168, wherein the fibers in the web are homogeneous.

192. The method according to claim 168, wherein the thermally bondable fiber has a length of not less than about 1 mm.

193. The method according to claim 168, wherein the thermally bondable fiber has a length of not more than about 25 mm.

194. The method according to claim 168, wherein the thermally bondable fiber has a length of from about 6 to about 13 mm.

195. A papermaking apparatus comprising:

at least one fiber storage chest tank for housing an aqueous fiber slurry including thermally bondable fibers exhibiting hydrophilicity;

a slotted screen for screening said fiber to remove any large interfering matter before the fiber reaches the headbox;

a headbox for depositing the fiber onto a forming wire;

a forming wire for receiving the deposited fiber;

a drying structure including a press felt; and

a Yankee dryer.

196. The papermaking apparatus according to claim 195, further comprising a fan pump.

197. The papermaking apparatus according to claim 195, further comprising a pulper.

198. The papermaking apparatus according to claim 195, further comprising an addition site for thermally bondable fiber, before said slotted screen.

199. The papermaking apparatus according to claim 196, further comprising an addition site for thermally bondable fiber, before said fan pump.

200. The papermaking apparatus according to claim 197, further comprising an addition site for thermally bondable fiber in the pulper.

201. A papermaking apparatus comprising:

at least one fiber storage chest tank for housing an aqueous fiber slurry including thermally bondable fibers exhibiting hydrophilicity;

a slotted screen for screening said fiber to remove any large interfering matter before the fiber reaches the headbox;

a headbox for depositing the fiber onto a forming wire;

a forming wire for receiving the deposited fiber; and

a through-air-dryer.

202. The papermaking apparatus according to claim 201, further comprising a Yankee dryer.

203. The papermaking apparatus according to claim 201, further comprising a fan pump.

204. The papermaking apparatus according to claim 201, further comprising a pulper.

205. The papermaking apparatus according to claim 201, further comprising an addition site for thermally bondable fiber, before said slotted screen.

206. The papermaking apparatus according to claim 201, further comprising an addition site for thermally bondable fiber, before said fan pump.

207. The papermaking apparatus according to claim 202, further comprising an addition site for thermally bondable fiber in the pulper.

208. A paper product comprising:

papermaking fiber; and

a monocomponent thermally bondable fiber exhibiting hydrophilicity, and further exhibiting a softening profile extending through, and glass transition within, the temperature range used to dry the product;

wherein said product has been wet formed.

209. The paper product according to claim 208, wherein the papermaking fiber is wood fiber.

210. The paper product according to claim 208, wherein said monocomponent thermally bondable fiber is chosen from polylactic acids.

211. The paper product according to claim 208, wherein the monocomponent thermally bondable fiber is surface modified by the introduction of a surfactant being chosen from at least one of an anionic, a cationic, a zwitterionic, and a non-ionic surfactant.

212. The paper product according to claim 211, wherein the surfactant comprises a non-ionic surfactant.

213. The paper product according to claim 208, further comprising a wet-strength resin.

214. The paper product according to claim 213, wherein the wet-strength resin is chosen from at least one of permanent wet strength agents and temporary wet strength agents.

215. The paper product according to claim 214, wherein the wet strength resin comprises a permanent wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, urea-formaldehyde resins, melamine formaldehyde resins, and polyamide-epichlorohydrin resins.

216. The paper product according to claim 214, wherein the wet-strength resin comprises a temporary wet strength agent chosen from at least one of aliphatic and aromatic aldehydes, glyoxal, malonic dialdehyde, succinic dialdehyde, glutaraldehyde, dialdehyde starches, substituted or reacted starches, disaccharides, polysaccharides, polyethylene imine, chitosan, and reacted polymeric reaction products of monomers or polymers having aldehyde groups.

217. The paper product according to claim 208, further comprising a dry strength agent chosen from at least one of starch, guar gum, polyacrylamides, and carboxymethyl cellulose.

218. The paper product according to claim 208, wherein the thermally bondable fiber is present in an amount of not less than about 2%.

219. The paper product according to claim 208, wherein the thermally bondable fiber is present in an amount of not more than about 50%.

220. The paper product according to claim 208, wherein the thermally bondable fiber is present in an amount of from about 5 to about 30%.

221. The paper product according to claim 208, wherein the product is a stratified product.

222. The paper product according to claim 208, wherein the product is a homogeneous product.

223. The paper product according to claim 208, wherein the thermally bondable fiber has a length of not less than about 1 mm.

224. The paper product according to claim 208, wherein the thermally bondable fiber has a length of not more than about 25 mm.

225. The paper product according to claim 208, wherein the thermally bondable fiber has a length of from about 6 to about 13 mm.

226. The paper product according to claim 208, having a basis weight of not less than about 10 lbs/ream.

227. The paper product according to claim 208, having a basis weight of not more than about 60 lbs/ream.

228. The paper product according to claim 208, having a basis weight of from about 13 to about 40 lbs/ream.

229. The paper product according to claim 208, wherein the fibers are bonded by heat treatment.

230. The method according to claim 168 wherein the web is heat treated at a temperature of at least about 260°F.